

6456938

1/22

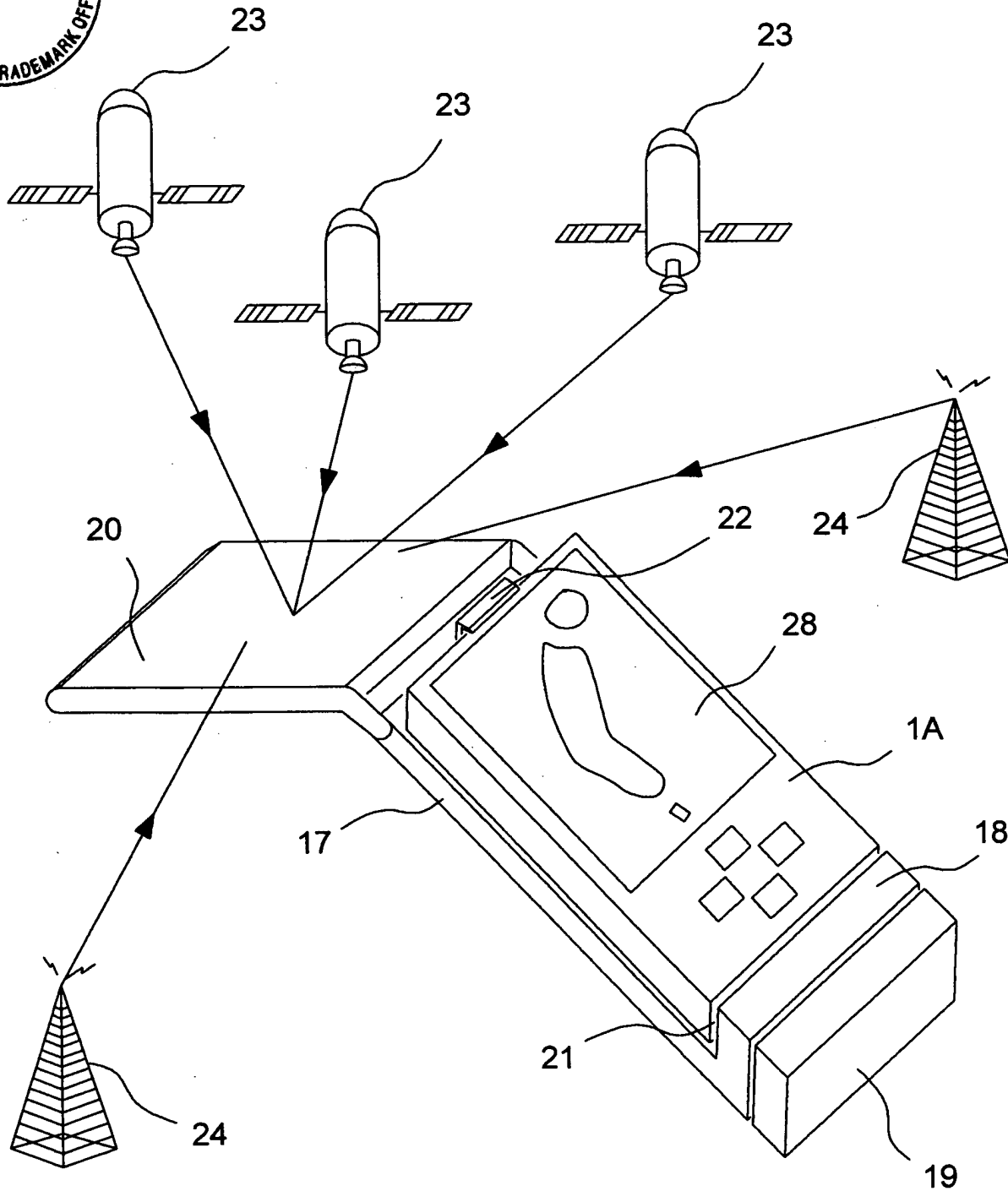


FIG. 1

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and Internet Web Site With Map Exchange and Editor

Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784

Docket # 41193/21440

2/22

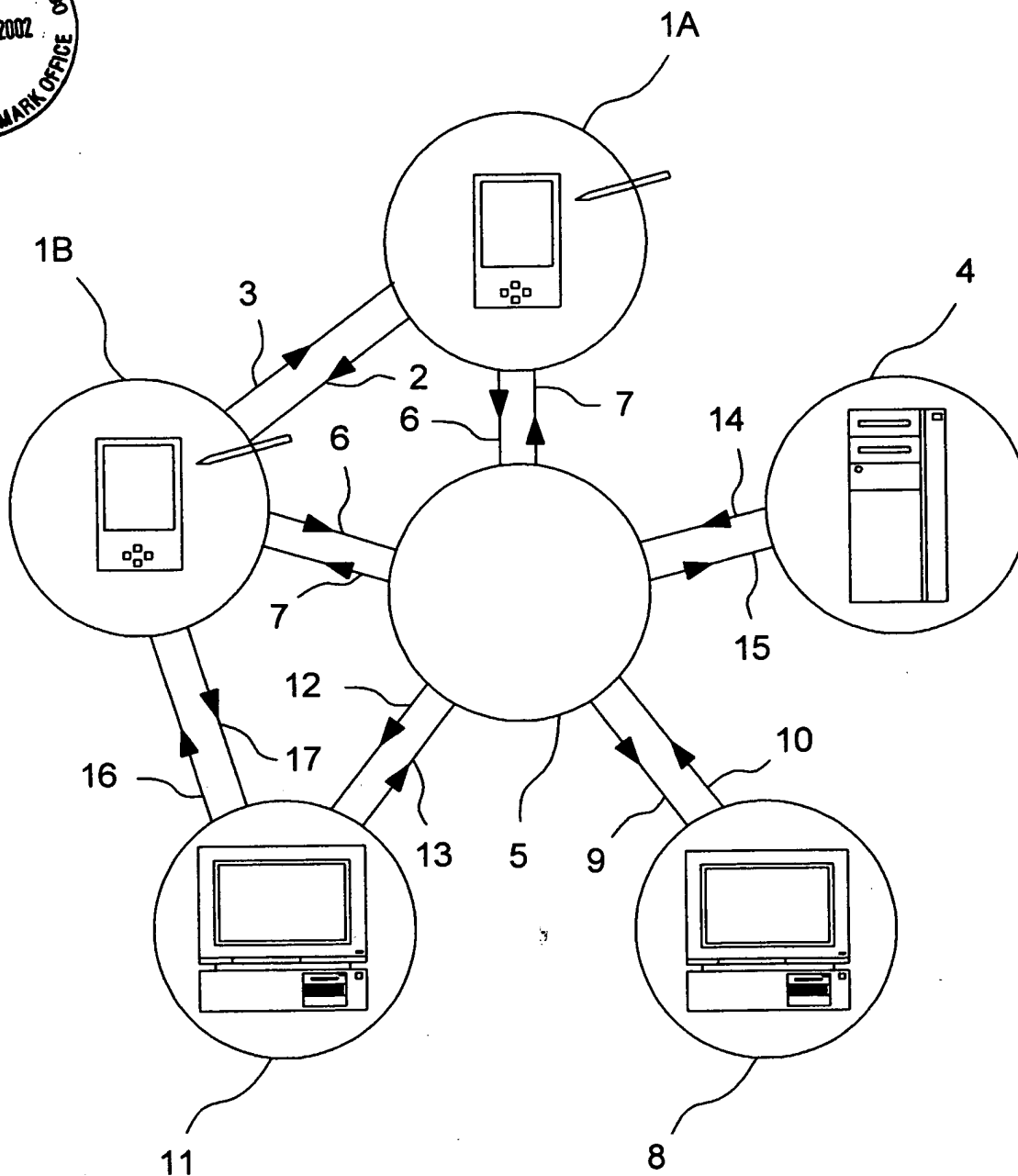


FIG. 2

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Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784

Docket # 41193/21440

3/22

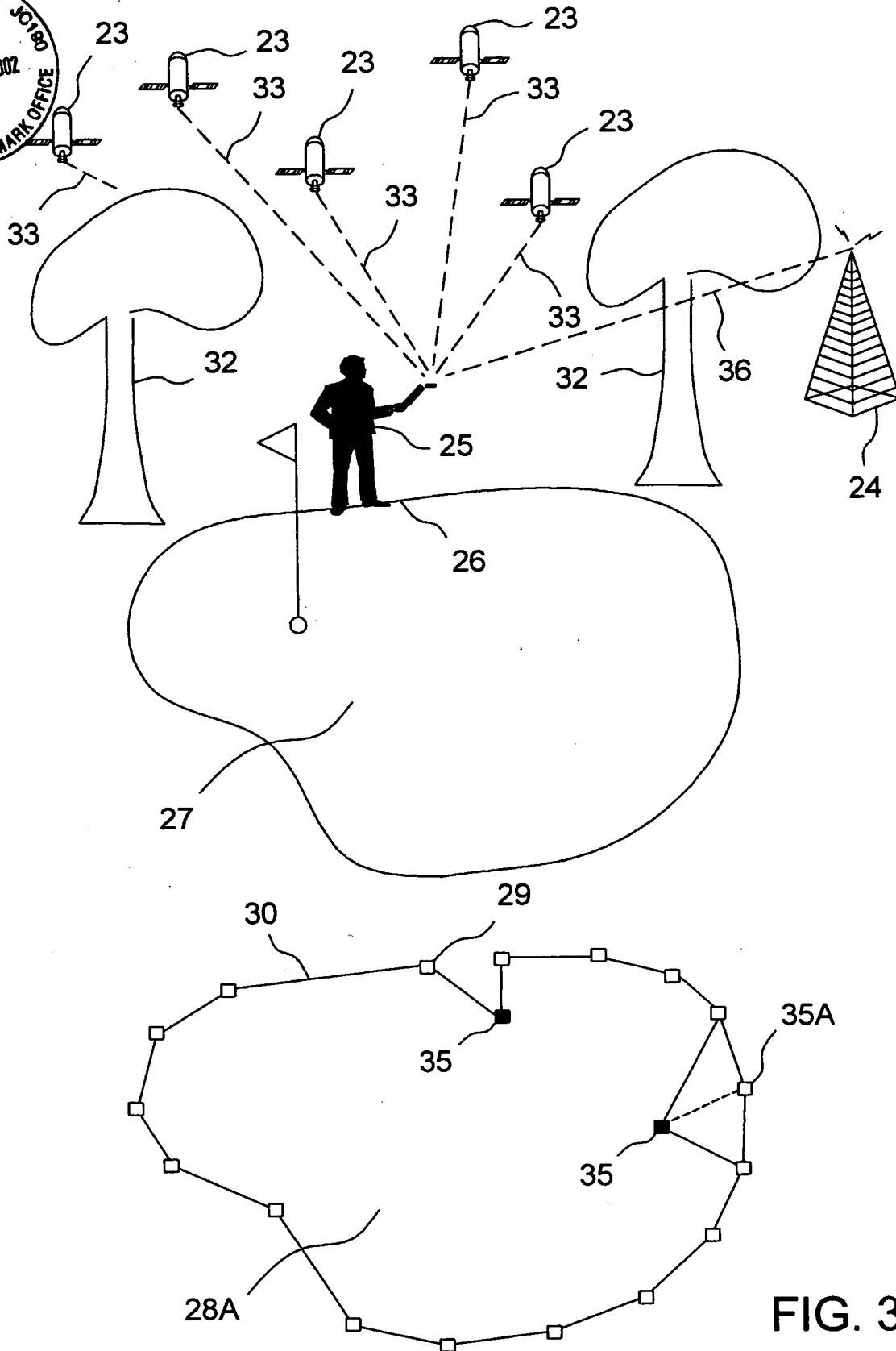
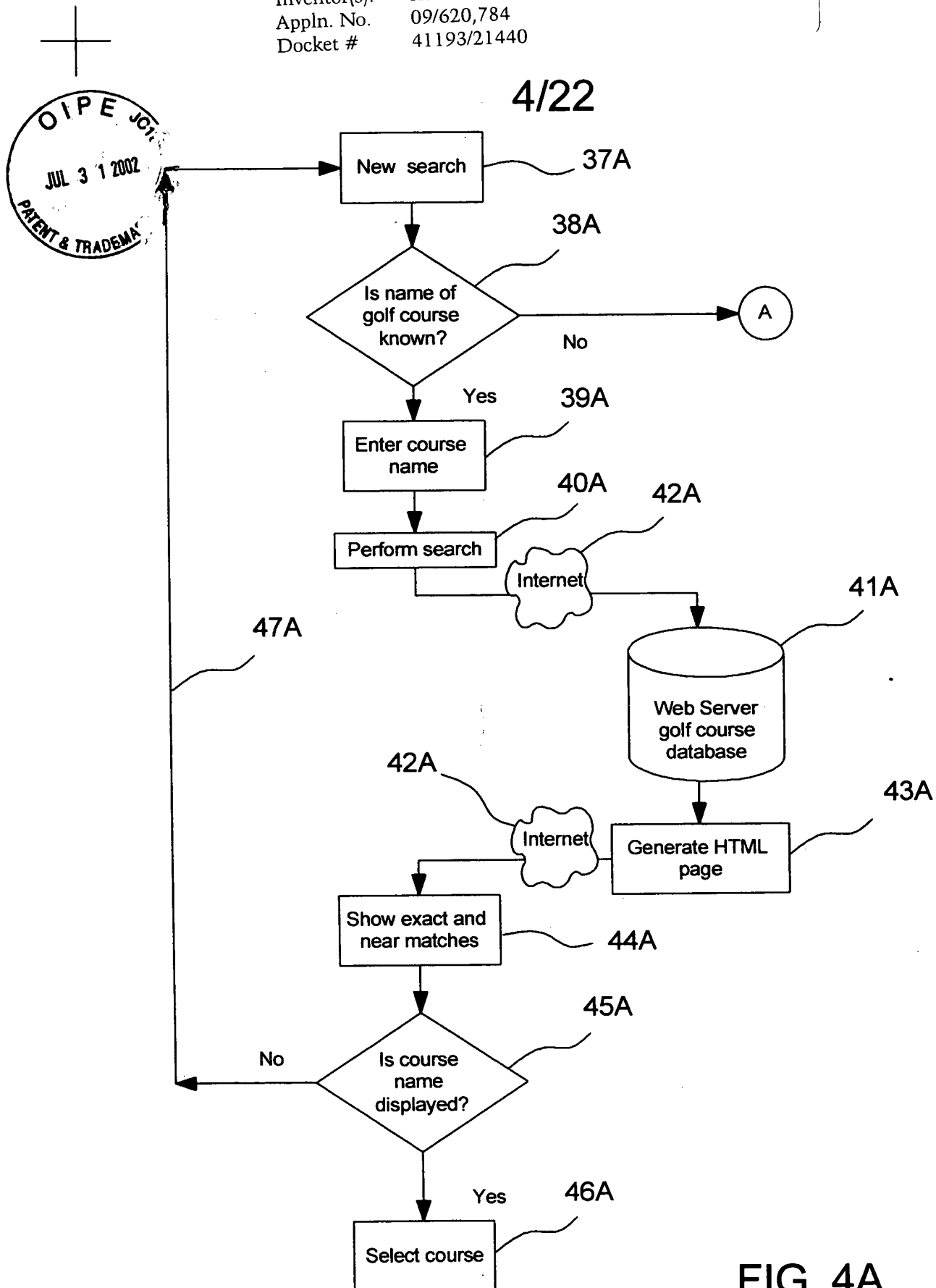


FIG. 3

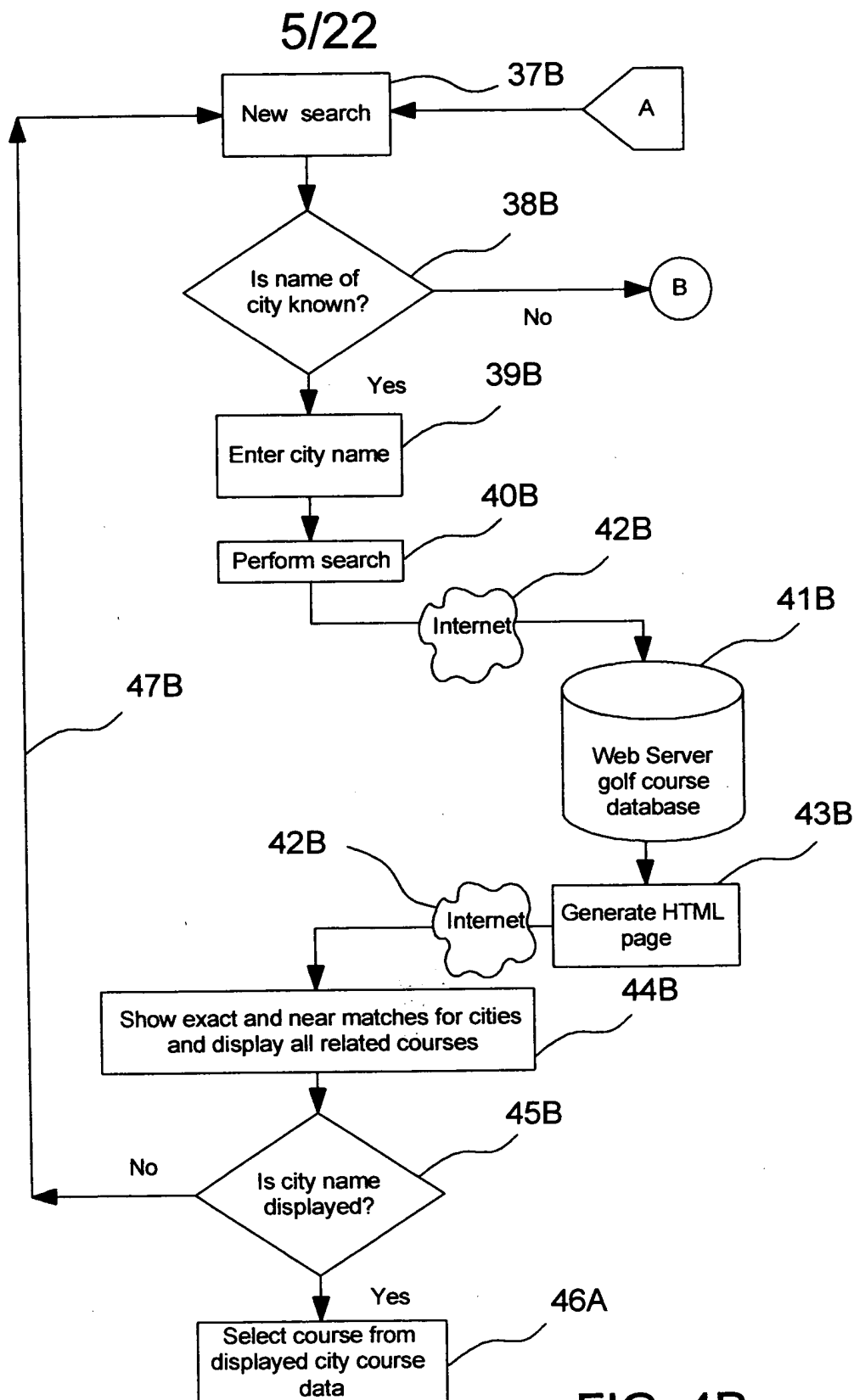


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Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784

Docket # 41193/21440



**FIG. 4B**

6/22

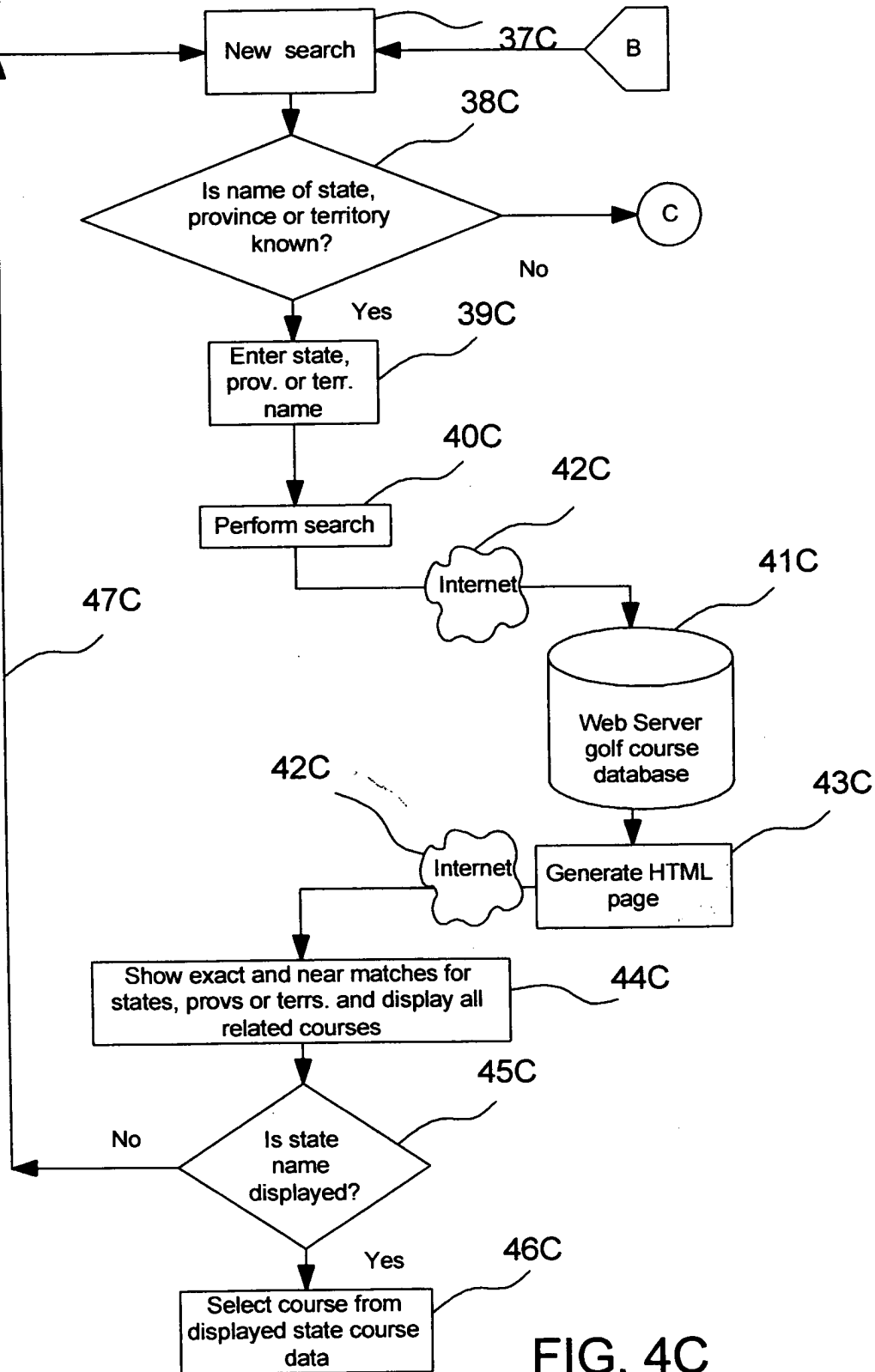


FIG. 4C

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Appln. No. 09/620,784

Docket # 41193/21440

7/22

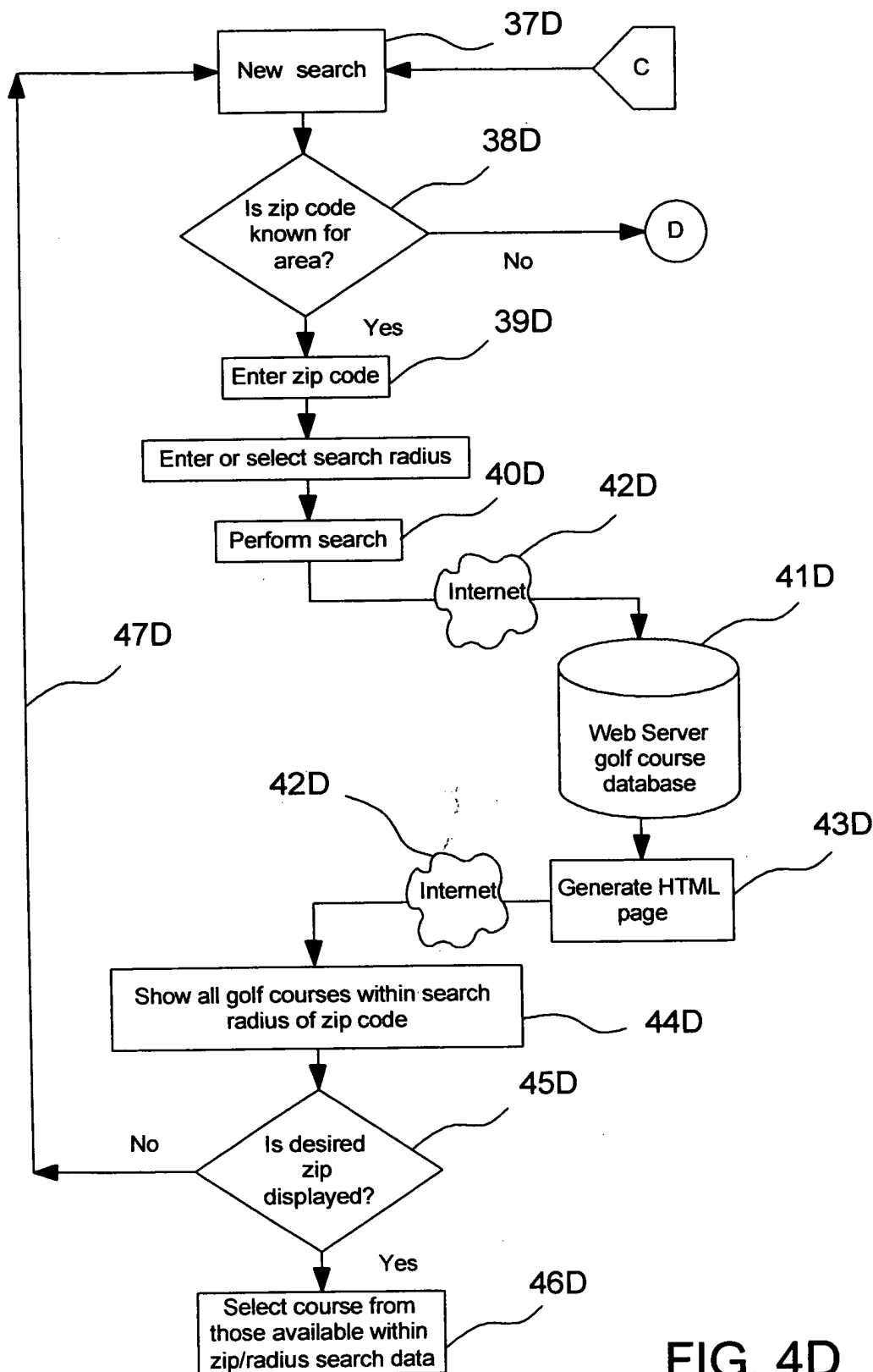


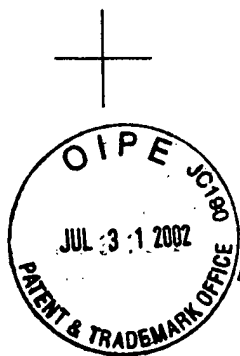
FIG. 4D

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Appl. No. 09/620,784

Docket # 41193/21440



8/22

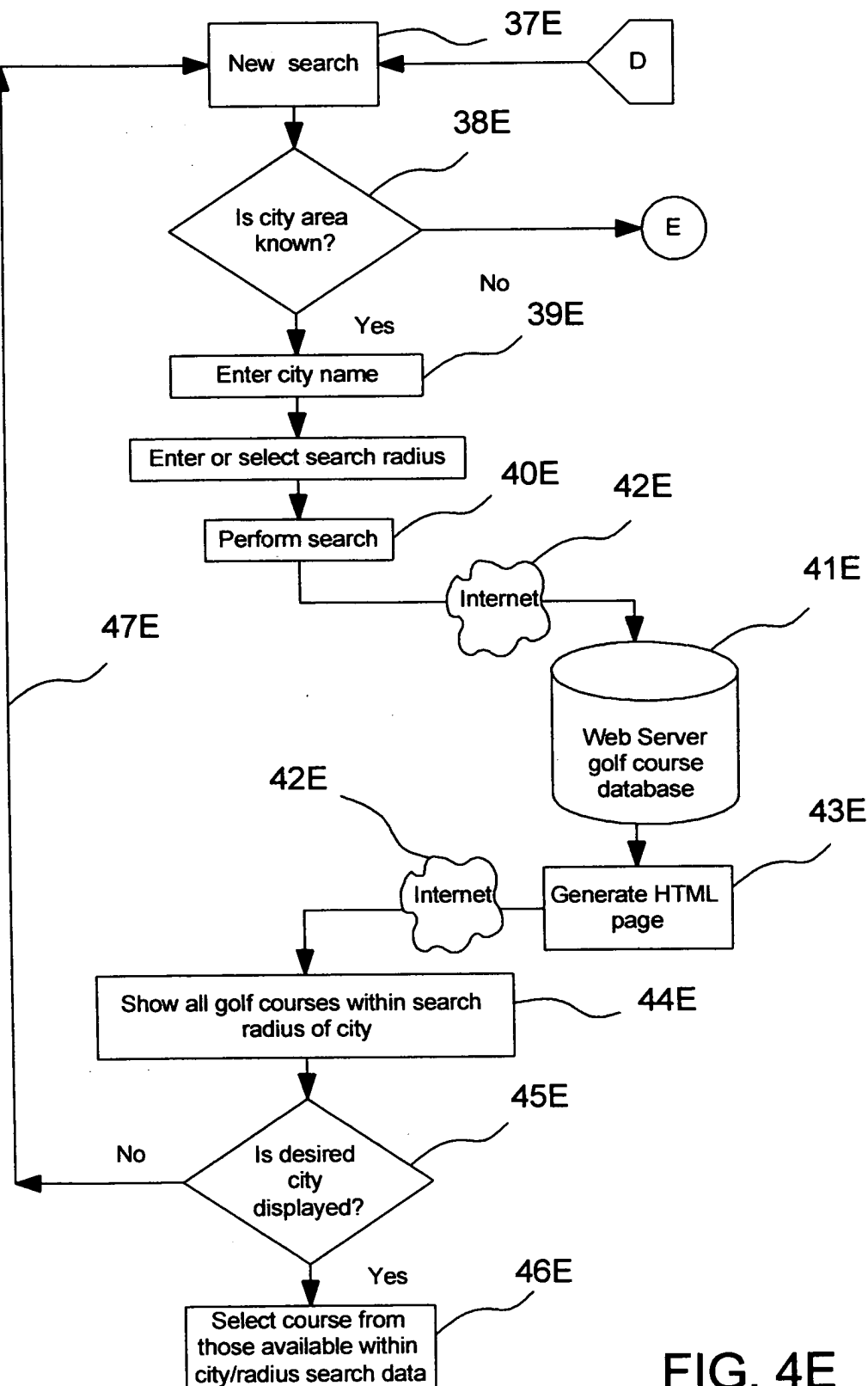


FIG. 4E



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Appln. No. 09/620,784

Docket # 41193/21440



9/22

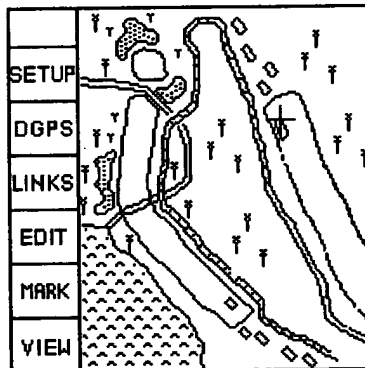


FIG. 5

	SETUP	UNITS	SETUP	SPEED
SETUP >	UNITS >	METER	UNITS >	WALK
DGPS >	SPEED >	YARD	SPEED >	RIDE
LINKS >				
EDIT >				
MARK >		SAVE		SAVE
VIEW >	MAIN	CANCL	MAIN	CANCL

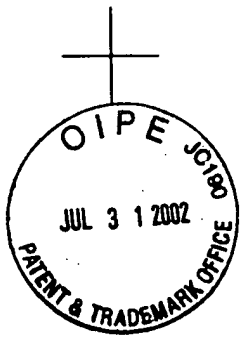
FIG. 6

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Appln. No. 09/620,784

Docket # 41193/21440



10/22

SETUP >	LINKS NEW >
DGPS >	OPEN >
LINKS >	CLOSE >
EDIT >	
MARK >	EXIT
VIEW >	BACK

FIG. 7

	EDIT	DELETE
SETUP >	DELET >	ALL
DGPS >	NOTE >	POINT
LINKS >	MOVE >	
EDIT >	ADD >	APPLY
MARK >		SAVE
VIEW >	CANCL	CANCL

FIG. 8

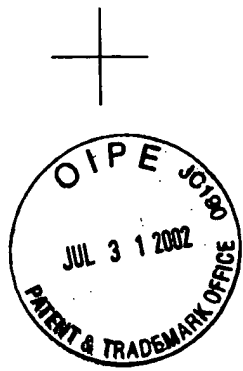


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 and Internet Web Site With Map Exchange and Editor

Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784

Docket # 41193/21440



11/22

	EDIT	NOTE
SETUP >	DELET >	
DGPS >	NOTE >	
LINKS >	MOVE >	
EDIT >	ADD >	
MARK >		SAVE
VIEW >	CANCL	CANCL

FIG. 9

	EDIT	MOVE
SETUP >	DELET >	
DGPS >	LABEL >	
LINKS >	MOVE >	
EDIT >	ADD >	
MARK >		SAVE
VIEW >	CANCL	CANCL

FIG. 10

Personal DGPS Golf Course Cartography Navigator  
and Internet Web Site With Map Exchange and Tutor

Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784

Docket # 41193/21440

12/22



SETUP >	EDIT DELET >	ADD END
DGPS >	LABEL >	MIDDL
LINKS >	MOVE >	
EDIT >	ADD >	APPLY
MARK >		SAVE
VIEW >	CANCL	CANCL

FIG. 11

SETUP >	AREA TEE	A or L BUNKR	A/L/Pt TREE	LINE PATH	POINT PIN
DGPS >	FRWAY	ROUGH	BUSH	OB	C-o-G
LINKS >	GREEN	WATER	ROCK	DITCH	
EDIT >	HOLE	BLDG	MOUND		
MARK >					
VIEW >	BACK		OTHER		

FIG. 12

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 Internet Web Site With Map Exchange and Editor

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Appln. No. 09/620,784

Docket # 41193/21440



13/22

XXXXXX	BEGIN	PAUSE
		MARK
		>
BEGIN	PAUSE	RESUM
>	END	END
CANCL	CANCL	CANCL

FIG. 13

XXXXXX	BEGIN	PAUSE
		MARK
		>
BEGIN	PAUSE	RESUM
>	END	END
POINT		
CANCL	CANCL	CANCL

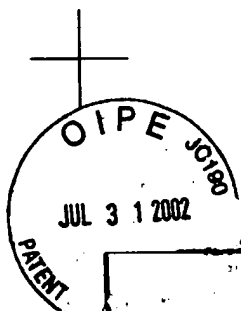
FIG. 14

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Appln. No. 09/620,784

Docket # 41193/21440



# 14/22

	TEE	FRWAY	GREEN	HOLE	BUNKR	ROUGH	WATER	TREE	BUSH	ROCK	MOUND	OTHER	PATH	OB	DITCH	CoG	FoG	PIN
Area	X	X	X	X	X	X	X	X	X	X	X	X						
Line					X	X	X	X	X	X	X	X	X	X	X			
Point								X	X	X	X	X				X	X	X
Hole Association	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	X	X	X

Mapping log rate (Hz)

Walking	1	1/3	1	1/3	1	1	1	na	na	na	na	1	1/3	1/3	1	na	na	na
Riding	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

## FIG. 15

	VIEW	ZOOM	VIEW	PAN
SETUP >	ZOOM >	IN	ZOOM >	◀
DGPS >	PAN >	OUT	PAN >	▶
LINKS >	ME	LINKS	ME	▲
EDIT >				▼
MARK >		BACK		BACK
VIEW >	MAIN	MAIN	MAIN	MAIN

## FIG. 16



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Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784

Docket # 41193/21440



15/22

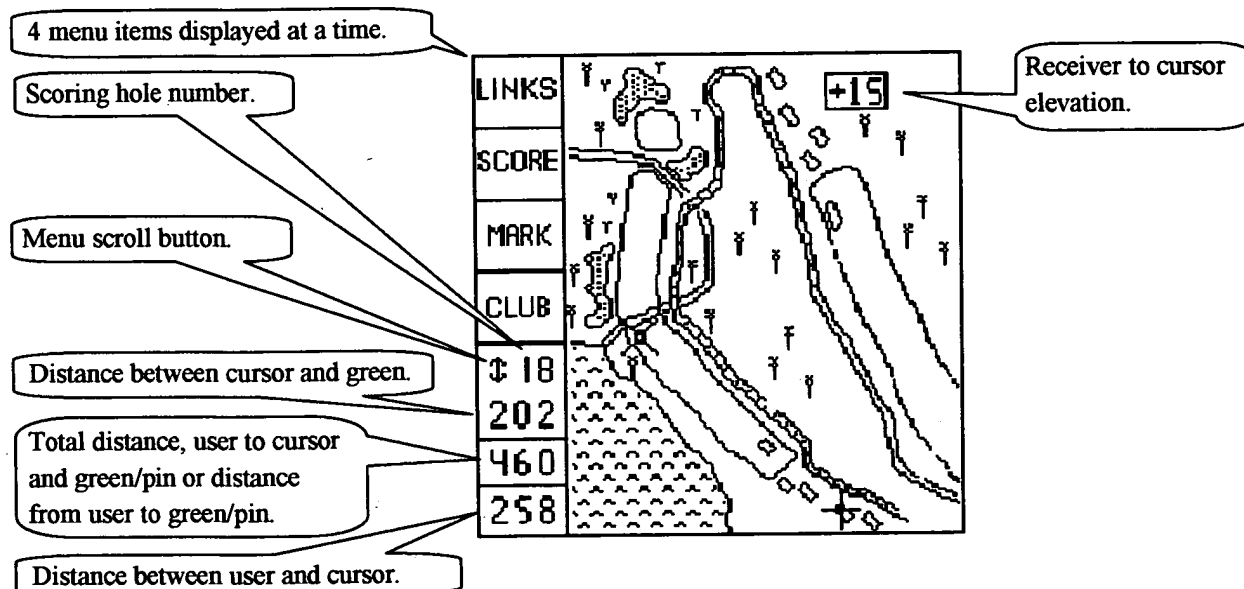


FIG. 17

SETUP >	SETUP	XXXXX
DGPS >	CLUBS >	
LINKS >	OTHER >	
SCORE >		
MARK >		
CLUB >		
VIEW >		
◆ 18 202		SAVE
460	MAIN	CANCL
258		

FIG. 18



Title: Personal DGPS Golf Course Cartographer,  
Navigator and Internet Web Site With Map  
Exchange and Tutor

Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784



16/22

## Mark Green Strokes

☒ Yes   ☐ No

## Green Reference Point

☒ Daily Pin Placement  
☐ Center of Green  
☐ Front of Green

## System Units

☒ English US (Yards)  
☐ Metric (Meters)

## Cursor Ghost Lines

☐ On   ☒ Off

## Display Elevation Window

☐ Yes   ☒ No

Default Target Cursor Distance: 999

☐ feet   ☒ meters

Antenna Height: 999

## Concentric Rover Circles

☐ On   ☒ Off  
☐ yards/meters   ☒ feet

FIG. 19

SETUP	>	
DGPS	>	
LINKS	>	
SCORE	>	
MARK	>	
CLUB	>	
VIEW	>	
◆ 18		
202		
460		
258		

LINKS
SAVE
CANCL

Pine Hills Country Club
◆ Rating: 69.9 Slope: 126
Number: 1
◆ Par: 9 Handicap: 99
Color: Gold
◆ Advertised Yardage: 999

FIG. 20



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 and Internet Web Site With Map Exchange and Tutor  
 Inventor(s): Kent Deon Barnard  
 Appln. No. 09/620,784  
 Docket # 41193/21440

17/22



SETUP >	SCORE	PUTTS	Hole Number: 7		
DGPS >	PUTTS >	PUTTS	1	2	3
LINKS >	PNLTY >		4	5	6
SCORE >	EDIT		7	8	9
MARK >	NEW ROUND			0	
CLUB >		SAVE			
VIEW >	MAIN	CANCL			
◆ 18 202					
460					
258					

FIG. 21

SETUP >	MARK LIE >
DGPS >	TARGET >
LINKS >	CUP
SCORE >	
MARK >	SAVE
CLUB >	CANCL
VIEW >	
◆ 202	
460	
258	

FIG. 22

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Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784

Docket # 41193/21440

18/22

SETUP  
 >  
 DGPS  
 >  
 LINKS  
 >  
 SCORE  
 >  
 MARK  
 >  
**CLUB**  
**5I 150>**  
 VIEW  
 >  
 ◆ 18  
 202  
 460  
 258

CLUB	1W 999 99 ◀ 99 ▶ 99	4I 999 99 ◀ 99 ▶ 99	PW 999 99 ◀ 99 ▶ 99
	3W 999 99 ◀ 99 ▶ 99	<u>5I 150</u> 25 ◀ 75 ▶ 15	SW 999 99 ◀ 99 ▶ 99
	5W 999 99 ◀ 99 ▶ 99	6I 999 99 ◀ 99 ▶ 99	LW 999 99 ◀ 99 ▶ 99
DUFF SHOT	1I 999 99 ◀ 99 ▶ 99	7I 999 99 ◀ 99 ▶ 99	
SAVE	2I 999 99 ◀ 99 ▶ 99	8I 999 99 ◀ 99 ▶ 99	
CANCL	3I 999 99 ◀ 99 ▶ 99	9I 999 99 ◀ 99 ▶ 99	

Club

Average stroke  
length with this  
club.

Average distance  
left of target line  
with this club  
(yds).

% Left or right  
of target line  
with this club.

Arrow in  
direction of  
greater %  
error (either  
left or right).

Average distance  
right of target line  
with this club  
(yds).

FIG. 23

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 and Internet Web Site With Map Exchange and Tutor

Inventor(s): Kent Deon Barnard  
 Appln. No. 09/620,784  
 Docket # 41193/21440



19/22

	VIEW	ZOOM	VIEW	PAN
SETUP >	ZOOM >	IN	ZOOM >	◀
DGPS >	PAN >	OUT	PAN >	▶
LINKS >	ME	AUTO	ME	▲
EDIT >		COURSE		▼
MARK >				BACK
VIEW >	MAIN	BACK	MAIN	MAIN

FIG. 24

Target Cursor	Point	×
Lie Marker	Point	+
Target Marker	Point	*
Pin	Point	!

FIG. 25

	DGPS	Diff	PICK
SETUP >	Diff >	AUTO	SCAN
DGPS >	GPS	PICK >	
LINKS >		VER#	
EDIT >			
MARK >			SAVE
VIEW >	CANCL	BACK	CANCL

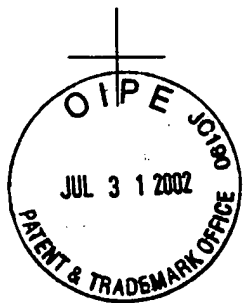
FIG. 26

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and Internet Web Site With Map Exchange Tutor

Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784

Docket # 41193/21440



20/22

PICK			
SCAN	Transmitter Location	Signal Strength/Signal to Noise Ratio	Distance (miles)
	St Louis MO	----- ---	65/25 73
	Rock Island, IL	----- ---	51/14 162
	Louisville, KY	----- --	43/12 105
SAVE	Memphis, TN	----- --	39/11 135
CANCL	Kansas City, MO	--- -	15/5 187

FIG. 27

MSG	Data	Format
GGA	UTC of Position	hhmmss.ss
GGA	Latitude, Direction	ddmm.mmmmmm, X
GGA	Longitude, Direction	dddmm.mmmmmm, X
GGA	Quality 1. Autonomous Position (GPS SPS mode) 2. RTCM differential corrected position	9
GGA	# of Satellites in use	99
GGA	HDOP	
GGA	Age of Differential	999
GGA	Diff. Station ID	9999
RMC	Status (Null, A, V)	X
RMC	Date	mmddyy

FIG. 28



Tit Personal DGPS Golf Course Cartographer Navigator  
and Internet Web Site With Map Exchange and Tutor

Inventor(s): Kent Deon Barnard

Appln. No. 09/620,784

Docket # 41193/21440



# 21/22

Feature	Type	Symbol
Hole	Area	na
Tee Box	Area	Solid line
Green	Area	Solid line
Fairway	Area	Solid line
Rough	Area	na
Ditch	Line1	Solid line
Building	Area	Solid line
Bunker	Area	
Water	Area	
Bush	Point	
Tree	Point	
Rock	Point	na
Mound	Point	na
Cart Path	Line3	6' wide solid line
Out of Bounds	Line2	
Flag or Pin	Point	
Area too small to display	Area	
Current Location	Point	

FIG. 29

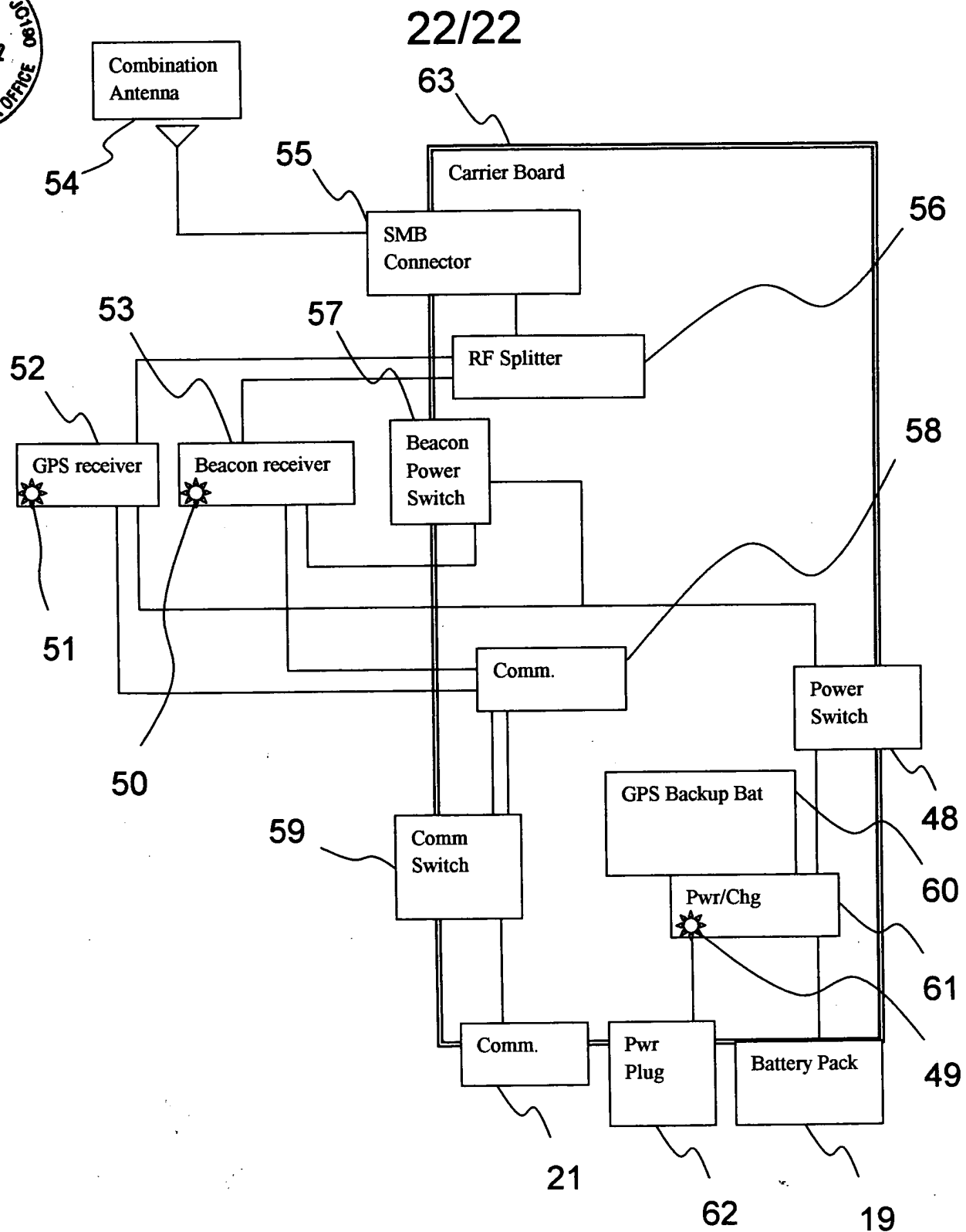


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Appln. No. 09/620,784

Docket # 41193/21440



**FIG. 30**